Herm©d+ quickstart

16-track sequencer & interface for your eurorack system.

16 tracks x 16 patterns —

8 effects per track —
grid-free polyphonic step sequencer —
live recorder & modulation editing —
back to back projects for endless performances —
4 CV inputs (assignable) —
8 CV/Gate outputs (with polymorphic layouts) —
extensive MIDI/USB connectivity.

BASICS

Sequencer workflow

Each of the 8 voices of Hermod+ (CV/Gate outputs) is controlled by a track.

A track can be configured to control more than 1 voice, for polyphonic use or for velocity and aftertouch playback. A track can also be used as a "modulation" track, to allow recording and playback of CV and CC messages.

A project includes up to 16 tracks. Each of these tracks contains:

- 16 patterns, which are arrangements of notes, gates or modulations
- an effect rack, with up to 8 effects
- a modMatrix, to control effect parameters using CV or CC

An unlimited number of Hermod+ projects can be stored on the SD card. They can be saved and loaded without stopping the playback, for seamless project transitions.

The user interface of Hermod+ is designed around 4 main modes:

step	effects		seq
Inspect and edit patterns: add or edit notes, gates and modulation. Set the length of the current pattern. Generate randomized events.	Add effects, configure their parameters, mute/unmute effects, use the modMatrix to set up effect modulations.	Mute/unmute tracks, set up voices layout, enter global settings.	Set the currently playing sequence on the fly, change playback style between sequences, program a chain of sequence, access the save/load menu.

Hermod+ architecture

Global settinas

• sync in/out, MIDI in/thru, CV/Gate in, rec settings, misc

Project

- Tempo (10 BPM to 280 BPM)
- track mutes
- sequences run modes and loop sync
- sona (chain of sequences)
- set of 16 tracks : track 1 2

TR1 .. TR8 MIDI TRACKS

voices layout (NOTE, MODULATION, POLYPHONIC VOICES, ...)

- . input config (MIDI, USB DEVICE, USB HOST, CV/GATE)
- . output config (MIDI, USB DEVICE, USB HOST, CV/GATE)
- player options: quantize, gate retrig, allocator, transpose
- fx rack : modMatrix + up to 8 effects 1 2 3 4 5 6 7 8
- set of 16 patterns:

pattern 1 2 3 4 5 6 7 ... 16

- pattern length (1 step ... 16 bars)
- MIDI events:

step notes (mono/polyphonic notes)

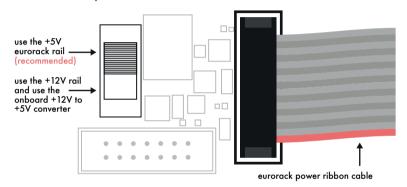
recorded pitchbend, aftertouch and sustain

a modulation (waveform automation)

a note = MIDI pitch, velocity and length

Wire up

Connect Hermod+ to your eurorack system power with the supplied ribbon cable. Most eurorack power supplies have a dedicated +5V rail (in addition to the +12V and -12V rails). If your power supply delivers +5V (1A minimum), we recommend to place the «5V switch » in the top position, in order to use the +5V rail for the digital circuitry of Hermod+. If your power supply does not deliver +5V, you may place the switch in the lower position. This switch is located on the back of Hermod+:



Selecting a track

In track mode, scroll to choose the selected track.

Access tracks TR1 to TR8 (the CV/Gate tracks) on the first page.

Access tracks MIDI TR1 to MIDI TR8 (the MIDI tracks) on the second page.

For faster track selection, press the corresponding track selection switch O.

Play/stop

To start the sequencer, press play . Pressing play again will stop the sequencer and return to the beginning of the sequence.

Live recording

Press rec while playing to capture a live performance (notes, pitchbend, aftertouch, sustain, modulation) coming either from an external MIDI instrument or controller, a computer or a modular system sending CV/Gate. Recording inputs is possible at any time, in every mode.

Hold rec to enter the REC settings menu. Multitrack recording, hard recording, punch in, looper mode and some shortcuts can be set in this menu.

TIP By default, events will be recorded on the currently selected track. Enable multitrack recording to record all your routed tracks (MIDI/CV in) at the same time.

TIP Enables hard recording to overwrite previously recorded notes (no overdub).

Project tempo

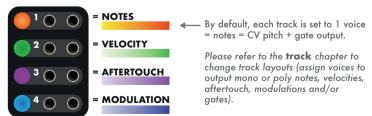
The BPM menu is accessed by holding . Scroll the encoder to change the BPM, or press rec repeatedly to tap the tempo.

NOTE Go to the SYNC INPUT settings to synchronize Hermod+ with a MIDI or analog clock.

CV/Gate voices

The color of the backlit track switches

help visualize the voices layouts, and the CV/Gate output values:



Reset and Clock outputs

In addition to the 8 pairs of CV/Gate, Hermod+ adds two dedicated gate outputs for transport:



- Reset: outputs a trig when Hermod+ starts (RESET ON PLAY).
- Clock: outputs a BPM-synchronized clock.

TIP The behavior of these outputs can be configured in the SYNC OUTPUT settings.

Calibration

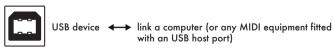
Calibrating Hermod+ can improve the factory accuracy of the analog inputs/outputs. For this operation, a voltmeter is required.

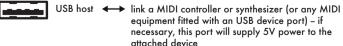
First, power on Hermod+ while pressing \boxtimes to start calibrating the CV outputs. Follow the steps on screen and use a voltmeter (and a patch cable) to measure and finetune each of the 8 CV outputs. At the end, press \boxtimes to save the calibration settings on the SD card.

The CV inputs can now be calibrated, using the previously calibrated CV outputs of voice 1. Power on Hermod+ while pressing \mathbf{N} , and follow the steps on screen. At the end, the calibration is done and saved automatically.

Usb device and host

Both ports are plug-and-play (USB Class Compliant) and act as MIDI inputs/outputs:



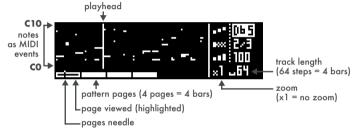


STEP MODE

Press step to enter step mode. This mode allows the editing of notes, modulations, gate events or live recordings.

Notes (or modulation events) of the current page are shown both on the screen and the 16 pads.

Under the piano roll, the bottom bar shows the number of bars in the current pattern, the currently viewed page, and the track playhead:



Pattern length, zoom and navigation

- Hold \(\) and turn the encoder to set the pattern length, from 16 (1 bar) to 256 steps (16 bars). When increasing the length, new pages will be available to display.

 TIP Hold \(\) and press the encoder while scrolling for finer resolution (17 = 1 bar + 1/16 note, 18 = 1 bar + 2/16, ...)
- Hold
 and turn the encoder to set the zoom value. Zoom in for precise editing, zoom out to get a global view. This will affect the number of pages.

 TIP It's possible to set a zoom of 2/3 to easily create triplets.

Edit a note pattern

On a note track, patterns are polyphonic and grid-free. It is therefore possible to add chords, superpose notes, record off-grid events, program complex grooves and compose intricate harmonies.

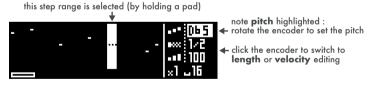
Each note event has 3 parameters: **pitch**, **length** and **velocity**. Pitch goes from note C0 to C10 (CV out -5V to 5V). Length is the duration of the note. Velocity is used when the track outputs MIDI, or when the layout has **VELOCITY** voices, which will output note velocities as control voltages.

ADD/DELETE A NOTE

To add or delete a note, simply press the corresponding step IIII (pad 1 to 16). A note will be added with the parameter values displayed on screen.

To set the pitch parameter before adding a note, rotate the encoder.

To add a note with a new **length** or **velocity**: hold the corresponding step, click the encoder to select the parameter (pitch, length, velocity) and scroll.



EDIT A NOTE

Editing a note works exactly in the same way, just press and hold the step !!!! where the note lies, and edit its parameters. The note will be updated in real time. If several notes are in the same step, all of them will be edited simultaneously.

TIP Hold multiple pads (instead of a single step) to select a range to be edited.

TIP Hold a pad to quickly copy its content. Then, press any other pad to paste it.

ROW EDITING

By default, the 16 pads show all notes in their corresponding step. For example, if a chord is present on the first step (pad 1), editing this step will edit the entire chord.

It is also possible to only display notes of a given pitch on the 16 pads. Hold **step** and scroll right to enter row editing. An arrow (→) will appear next to the selected note.

Notes can be added, edited and removed in the same way as in the regular step editing. It's a great way to fine-tune a pattern note per note, and program chords or drums.



To exit row editing, hold step and scroll left. Next to the selected note, will reappear.

TIP Press **step** to cycle through the notes already used in the pattern.

NOTE LEARN

Step mode greatly benefits from the use of an external MIDI controller. A keyboard can be used to set the current pitch (and velocity) before adding a note, and even learn a chord:



Edit a modulation pattern

NOTE To create a modulation layout (mod track), please refer to the track chapter.

In a mod track pattern, two types of events can be edited: **mod** \wedge and **gate**. Press **step** to cycle through the event type to be edited.

CREATE AND EDIT MODULATIONS

- Scroll to set the mod value 🔨.
- Press the corresponding step IIII to add or delete a mod event.
- Hold a step and scroll to offset the **mod** value of this step.

this step range is selected by holding a pad



mod highlighted: turning the encoder sets the value

CREATE AND EDIT GATES

- Scroll to set the gate length
- Press the corresponding step **!!!** to add or delete a **gate** event.
- Hold a step and scroll to edit the gate length of this step.



Recording notes vs. recording a modulation

Another way to program patterns is to press rec while playing to capture a live performance. On a mod track, a CV input (or a CC MIDI input) will be used to create the events. On a note track, a CV/Gate input (or a MIDI channel input) will be used. These inputs are configured in the **TRACK CONFIGURATION** menu.



a sine wave modulation recorded from a CV input onto a mod track

Pattern context menu

Press the encoder in step mode to access the pattern context menu, including the usual copy, paste and delete functions. It's also possible to copy the current page, and delete only the pitchbend, the aftertouch, the modulation, or the sustain.

TIP Hold step and press 2 to delete all events of the current active pattern.
TIP Hold and turn the encoder to rotate all the notes or modulations in a pattern. It will move all the events left/right, in time increments related to the zoom level.

Generator

Hermod+ boasts a powerful pattern randomizer: the Generator. This algorithm generates random notes (or modulations) in accordance to its parameters, which can be found under **PATTERN EDIT MENU > GENERATOR SETTINGS** (quantize grid, note amount, note range, pitch range, velocity range and length range).

To generate a new pattern, enter PATTERN EDIT MENU > GENERATOR and select RANDOMIZE. Rather than generating a entire new pattern, randomization can be applied to individual parameters of existing notes, such as pitch, length or velocity.

TIP Use a SCALE effect to quantize the randomized notes and get a musical pattern.
TIP Hold step and press 11 to delete and randomize the entire pattern.

EFFECTS MODE

Each track can have up to 8 effects. Notes played live or recorded in a pattern are processed and sent to the outputs in real-time by the effect engines. All the effects are non-destructive, and can handle polyphony.

The position of an effect in the chain is very important: an Harmonizer placed after an Arpeggiator will not sound like an Arpeggiator placed after an Harmonizer. Please note that it is possible to add multiple effects of the same engine on the same track (e.g. chaining two arpeggiators).



the effect chain: in this track, incoming notes will be harmonized, then arpeggiated, a chance will be applied, then notes will be quantized to a scale and finally, swung.

3 effect slots are empty.

Every effect parameter can be edited in real-time via CC message and CV inputs, thanks to the modMatrix. Press II in EFFECTS mode to access the modMatrix.

Effects list

DELAY

ARPEGGIATOR Turns notes and chords into running patterns.

CHANCE Plays or skips an event, based on probability.

Simulates an analog delay effect, using the velocity data.

ENVELOPE AHDSR envelope, triggered with every new note.

Generates rich polymetric rhythmic patterns.

FILTER Drops a range of events.

LFO Generates high resolution waveforms.

GLIDE/SMOOTH Interpolates note pitch.
HARMONIZER Turns notes into chords.

RANDOMIZER
RATCHET
RATCHET
REPEATS incoming notes at a given rate.

Quantizes incoming notes to a given scale.

SWING Swings notes to create groovy rhythms and go "off the grid".

Add an effect

To add an effect, select an empty effect slot 🖪 by scrolling with the encoder, then press the encoder to enter the effect selection menu :



Select the desired effect and press the encoder to confirm.

Edit an effect

Select an effect and press the encoder to enter the effect's parameter menu:



TIP Select an effect and hold the encoder to enter the effect's contextual menu, which includes actions such as **EDIT, COPY, DELETE,** ...

TIP To paste an effect in an empty slot **1**, hold the slot and select **PASTE**.

Mute an effect

You can experiment with different effects in the same rack by muting/unmuting them the same way you would with tracks.

Just press the corresponding pad |||| (FX1 to FX8).

TRACK MODE

The 16 tracks of Hermod+ can be configured in track mode.

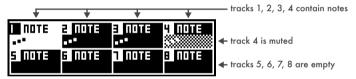
- The first 8 tracks (TR1...TR8) are the CV/Gate tracks (which can also output MIDI). Press one of the 8 track selection switch

 to select the corresponding track.
- The 8 remaining tracks (MIDI TR1 ... MIDI TR8) can only output MIDI.

 Scroll past track 8 to display the MIDI page and select a MIDI track (once this page is selected, the track selection switches ocan also be used).

Mute/unmute tracks

Press the corresponding pad IIII to mute/unmute a track.



Track layouts of CV/Gate tracks

The first 8 tracks can be configured to perfectly fit your eurorack system. CV/Gate tracks are "polymorphic", which means they can use one or more CV/Gate voices to output monophonic or polyphonic CV/Gate notes, velocity, aftertouch, etc...

To set a track layout:

- Select the track to configure by turning the encoder.
- Press 🛮 to start the configurator.
- Select the number of voices the selected track will control.
- Select the final pre-defined layout for these voices.

There are always 8 voices (the 8 CV/Gate outputs of Hermod+), but the number of tracks can be variable. Of course, different layouts can be mixed and matched.

Some examples of track layouts:

1 VOICE ► MONO (the default layout)

1 track = 1 voice. Plays note events on a single voice, for controlling "mono" CV/Gate eurorack modules (most of them are).

1 VOICE ► MODULATION (mod track)

1 track = 1 voice. Plays both a CV modulation automation and Gate events. Its purpose is to control eurorack CV modulation inputs (e.g. a filter cutoff frequency).

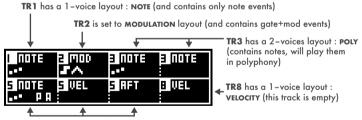
3 VOICE ► MONO + AFTERTOUCH + VELOCITY

1 track = 3 voices. The first CV/Gate voice outputs the note events. The second and the third voices output aftertouch and velocity respectively.

4 VOICE ▶ POLY

1 track = 4 voices. Plays note events in a polyphonic way, using voice-stealing.

TIP When a track uses a voice for modulation, velocity or aftertouch, it's possible to program the gate output of this voice to control drum sequences, or use it as an additional clock by placing notes at a given time interval.



TR5 has a 3-voices layout: NOTE, AFTERTOUCH and VELOCITY (contains note+pitchbend+aftertouch events)

Track context menu

Enter the track context menu by pressing the encoder. Available actions are : copy, paste, and clear of the currently selected track.

Track configuration

To enter the configuration menu (TR1...TR8 and MIDI TR1...MIDI TR8), hold the corresponding track switch ... Track settings are listed below:

Player options

QUANTIZE: OFF, 1/32, 1/24, 1/16

Enables the track timing quantization, and select the grid.

GATE RETRIG : OFF, ON (TR1...TR8 ONLY)

When enabled, the track will trigger the gate output each time a new note is overlapping another note, in order to break the glide/legato.

ALLOCATOR: POLY, CYCLIC, FIRST, RANDOM (TR1...TR8 ONLY)

Defines how the voice-stealing works when the track layout is set to polyphonic.

APPLY SUSTAIN: OFF, ON

When enabled, sustain pedal messages (MIDI CC64) will directly affect the note events being sent out. When the sustain pedal CC is high (pedal is pressed), all note-off events will be held.

TRANSPOSE: OFF, ON

When enabled, the current track can be transposed by track 16 (TRSP).

Inputs

INPUT PORT: OFF, MIDI, USB DEVICE, USB HOST

INPUT CHANNEL: CH01, ..., CH16

Sets the track input port and channel (the track will be controlled by events coming from the selected port and channel).

INPUT MOD: CCO, ..., CC119 (default = CC1 = modulation wheel)
The track can listen to any incoming MIDI CC to record the modulation waveform.

INPUT CV/GATE: OFF, CV/GATE AB, CV/GATE CD, MOD A, B, C, D
Sets the track analog input to be listened, in order to play and record notes or
modulations

INPUT GENERATOR: OFF, GATE A, GATE B, GATE C, GATE D

Any of the 4 analog inputs can be used to trigger the random generator.

Outputs

OUTPUT PORT : OFF, MIDI, USB DEVICE, USB HOST, ALL

OUTPUT CHANNEL: CH01, ..., CH16
Sets the track output port and channel.

DEST MOD: CC0, ..., CC119

DEST PITCH: pitchbend, CCO, ..., CC119

DEST AFTERTOUCH: aftertouch, CCO, ..., CC119

The modulation automation, as well as the recorded pitch and aftertouch, are sent to this defined MIDI message.

OUTPUT CV RANGE: -5V +5V, -1V +1V (TR1...TR8 ONLY)
Allow Hermod+ to follow the video synthesis CV standard (-1V 1V).

OUTPUT CV FINETUNE : -63, ..., +63 (TR1...TR8 ONLY)

Finetune the output voltage of the voice.

OUTPUT CV BEND RANGE: 1, ..., 24 (TR1...TR8 ONLY)
Sets how the recorded pitchbend affects the note pitch.

OUTPUT CV MOD MIN: -5V, ..., +5V (TR1...TR8 ONLY)
OUTPUT CV MOD MAX: -5V, ..., +5V (TR1...TR8 ONLY)

Sets the range of the modulation output on this voice.

SEQUENCE MODE

In Hermod+, sequences (SE1, SE2, ..., SE16) are used to arrange the patterns of each track. For example, when selecting sequence SE3, every track will switch to pattern 3 in sync.



tracks overview: progress bars for each patterns, playing in concurrency (as each pattern has its own length, the progression % may be different, leading to polymetric effects)

Launching a sequence

To select a new sequence, simply press the corresponding pad iiii (1 to 16).

The sequence will be launched as defined by the LOOP value and the RUN mode.

Hold and turn the encoder to select the RUN mode:

- Sync = synchronized sequence change, using the LOOP parameter.
- Beat = sequence change will happen on next beat.
- Free = all patterns will keep their previous playhead position.
- Restart = all pattern positions will be restarted at their beginning.

Hold \(\) and turn the encoder to select the LOOP value (the synchronization of sequence change). Loop can be set from 1 bar to 16 bars, or can be auto-set to shortest pattern length, longest pattern length, or the length at which all tracks resynchronize (least common multiple of all pattern lengths).

TIP Clicking the encoder while scrolling allows for 1/16TH LOOP precision.

Chain sequences

Sequences can be chained together to form a "song".

To set a song, hold ☑ and press one of the 16 pads to add sequences to the song. To delete a song, press ☑ briefly.

After pressing play, the entire song will play in a loop. Each sequence will be playing according to the time set by to the **LOOP** parameter.



a song chain of 8 sequences, SE1 is currently playing. All tracks are playing patterns 1 together in a loop, for a duration of LOOP = 1 BAR

Sequence context menu

Press the encoder to access the sequence context menu. Available actions are: copy, paste and clear the selected sequence, as well as access the project menu.

Project save/load

Hermod+ can load a project without stopping the playback, for endless performances and seamless transitions.

While in seq mode, press the encoder and select PROJECT SAVE LOAD:

- SAVE PROJECT : save current project.
- SAVE PROJECT AS : save with a new name.
- DELETE PROJECT: browse the project list and select a project to be deleted.
- NEW PROJECT: create a new, empty project with default settings.
- LOAD PROJECT: Hermod+ can load a project in the background, while the current project is playing. The background-loaded project can be launched in sync, without interrupting the performance.

SETTINGS

In track mode, press 1 to enter the global settings menu.

Select **SAVE** to store any changes onto the SD card (Anything not saved will be lost.) Please note that settings are global and are used by all projects.

Sync input

CLOCK SOURCE: INTERNAL, MIDI, DEVICE, HOST, CV A, CV B, CV C, CV D
Hermod+ can use its internal clock or follow an incomina clock.

CV RESET: OFF, CV A, CV B, CV C, CV D
Use an analog gate to reset the playback position.

CV PLAY ENABLE : OFF, CV A, CV B, CV C, CV D

Use an analog gate to start the playback. A high state will run the sequencer.

CV REC ENABLE: OFF, CV A, CV B, CV C, CV D Use an analog gate to enable/disable the recording.

CV CLOCK DIV: 1/96, 1/48, 1/32, 1/16, 1/8, 1/4, 1/2, 1/1

When CLOCK SOURCE = CV, sets the speed of the expected incoming clock (defines the time of a step at which Hermod+ will advance in response to an incoming trig).

Sync output

MIDI/DEVICE/HOST CLOCK: OFF, CLOCK+TRANSPORT, ONLY CLOCK Transmit clock and start/stop messages to the selected output.

CLOCK ON STOP: OFF, SEND

Hermod+ can always send MIDI clocks, even when player is stopped.

RESET OUT MODE: RESET ON PLAY, RESET ON STOP, RUN, STOP

Configure the behavior of the dedicated reset gate output.

CLOCK OUT RATE: 1/96, 1/48, 1/32, 1/16, 1/8, 1/4, 1/2, 1/1

Sets the speed/resolution of the dedicated clock gate output.

MIDI input

ACTIVE TRACK PORT: OFF, MIDI, DEVICE, HOST, ALL

ACTIVE TRACK CHANNEL: CH01, ..., CH16

Route MIDI messages to the active track regardless of the track's input parameters.

NOTES/CC MESSAGES/PITCHBEND/AFTERTOUCH: IGNORE, ACCEPT

Accept or ignore the incoming selected MIDI event.

PROG CHANGE SEQ: CH01, ..., CH16

Enable incoming MIDI PC to select the playing sequence (SE1 to SE16).

MIDI thru

Configure MIDI ports routing, handy when using Hermod+ as a MIDI hub.

CV/Gate input

ACTIVE TRACK: OFF, CV/GATE A, B, C, D, MOD A, B, C, D

Route CV to the active track regardless of the track's input parameters.

CV IN RANGE: -5V +5V, 0V +5V, -1V +1V

Scale the input signal to Hermod's standard.

Misc

AUTOLOAD : OFF, ON

Automatically loads the last saved or loaded project at startup.

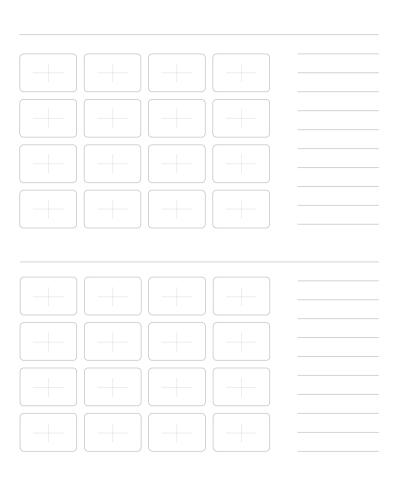
LED BRIGHTNESS: 0%, 200%

Adjust leds brightness level.

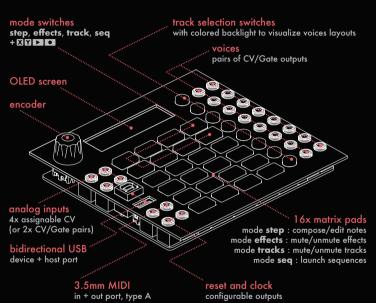
HOLD TIME: FASTER, FAST, NORMAL, SLOW, EXTRA SLOW

Change the time for a button press to be registered as a Hold action.

NOTEBOOK



INTERFACE OVERVIEW





Quickstart version HPQ-1-01 Updated on July 2023 Printed in France Herm@d+

User manual available online, frequently updated with hermodOS new features: squarp.net/hermodplus/manual

